



# Mozambique and IRRI

## Upgrading the rice agri-food system for more sustainable production

### Challenges in Mozambique

- Lack of high-yielding varieties that have good grain quality and resistance to pests and diseases
- Poor crop management practices
- High postproduction losses during harvesting and processing
- Limited availability of farm inputs like labor and fertilizer in the midst of increasing demand for rice
- Farmers' limited understanding and access to rice markets
- Persistence of old and unreliable irrigation schemes

Rice cultivation has been practiced in Mozambique for more than 500 years. It is mainly done in lowland rainfed ecologies, where farmers follow traditional management practices.

Rice is one of the major crops for production in Mozambique, along with maize, wheat, and sorghum. However, rice consumption has increased rapidly in recent years, from 86 thousand tons in 1990 to 519 thousand tons in 2010, at an annual growth rate of 8.6%. This shift in consumer preference, like other African countries, is attributed to urbanization and rice's convenience in preparation.

IRRI assists Mozambique in its initiatives in upgrading the rice agri-food systems in the country and building capacity to sustain its rice industry. Since 2006, IRRI have conducted activities that include rice breeding, socioeconomic studies, crop production and post harvest, capacity building, information management, and private sector village-based programs.

Today, IRRI has three research and development regions in Mozambique: Maputo and Xai-xai for irrigated conditions and Quelimane for rainfed condition. The IRRI Mozambique office also serves as one of the Institute's regional offices in Africa, strengthening the country's strategic role in ensuring food- and nutrition-security in the region and beyond.







## Fast Facts

- Agriculture occupies about 81% of the workforce in a population of 23.9 million (2011).
- In 2013, with an estimated 5.6 million ha of arable land, only 6-7% of the total area, roughly 300,000 ha, are allocated to rice.
- The main rice planting season is from November to January, while the harvesting season is from May to June.
- In 2014, rice production is estimated to have reached more than 155,000 tons over an area of 376,000, with yield of 0.41 t/ha.

## KEY ACHIEVEMENTS

### Breeding new rice varieties tailored for Mozambique

Since 2006, IRRI has introduced more than 6,000 breeding lines of rice for irrigated and rainfed ecosystems into Mozambique to evaluate their performance locally and select the best ones for the country. In 2011, Makassane, the first variety of IRRI-bred rice developed especially for Mozambique was released.

### Involving farmers in choosing new rice varieties

Every season, IRRI staff in Mozambique conduct Participatory Variety Studies (PVS). The studies take place in at least 15 locations across the country, including 8 locations that are irrigated and 7 that are rainfed. Involving farmers in breeding activities helps ensure new rice varieties meet their needs. It can also increase the rate of adoption of new rice varieties because farmers have already seen how well they perform.

### Ensuring seeds for farmers

In partnership with Agriculture Research Institute of Mozambique (IIAM), IRRI Mozambique assists in purifying seed and multiplying the seed of existing released rice varieties in the country. In 2011, three tons of purified, breeder and foundations seeds have been produced and ready for multiplication by IIAM and ultimately distributed to the farmers.

### Introducing better management practices

IRRI establishes rice plots across Mozambique to show farmers best management practices, ranging from land preparation to harvest. Postharvest technologies like small-scale mechanization, including pedal and mechanical threshers, and super bags for seeds and corn weed, are showcased to demonstrate production efficiency.

### Building public and private partnerships

IRRI Mozambique is actively forging partnerships between public and local private companies and organizations for the benefit of better production and local communities. One example is the partnership between Palmeira Rice Mill and the three villages of Massavassi, in Chokwe district. Technical assistance is extended to farmers in these three villages from land preparation to harvest in order to increase yield to supply the demand set by the market and through the Palmeira Rice Mill.

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#### International Rice Research Institute

IRRI aims to improve livelihoods and nutrition, abolishing poverty, hunger, and malnutrition among those who depend on rice-based agri-food systems. In doing so, IRRI's work protects the health of rice farmers and consumers, and the environmental sustainability of rice farming in a world challenged by climate change. IRRI's work promotes the empowerment of women and supports opportunities for youth in an equitable agri-food system.

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